

GVNW

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September 14, 1998

Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, NW Room 222
Washington, DC 20554

Dear Ms. Salas:

Enclosed are the original and four (4) copies of the comments of GVNW Inc./Management in response to the Commission's Notice of Inquiry in CC Docket No. 98-146. Please note that the date in the header for both Exhibits A and B is September 9, the date that the data was compiled.

Also enclosed is one copy of our comments to be stamped and returned in the enclosed self addressed stamped envelope.

Any questions regarding this filing may be directed to me at (503) 612-4400.

Sincerely,

Jeffrey H. Smith

cc: International Transcription Service
1231 20th Street NW
Washington, DC 20036

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)	
)	
Inquiry Concerning the Deployment of)	CC Docket No. 98-146
Advanced Telecommunications)	
Capability to All Americans in a Reasonable)	
and Timely Fashion, and Possible Steps)	
to Accelerate Such Deployment)	
Pursuant to Section 706 of the)	
Telecommunications Act of 1996)	

COMMENTS OF GVNW INC./MANAGEMENT

Introduction

GVNW Inc./Management (GVNW) is a management consulting firm which provides financial and regulatory consulting services to independent telephone companies. These comments focus on the impact that the issues raised in the Notice of Inquiry (NOI) may have on small LECs and, ultimately, on the provision of advanced telecommunications capability throughout rural America. The preamble to the Telecommunications Act of 1996 states the intent of Congress *"to provide for a pro-competitive, deregulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans..."*

We are pleased that the Commission is addressing the challenges we face with respect to widespread deployment of advanced telecommunications capability for all Americans. We believe that the deployment of advanced telecommunications capability¹ to rural Americans will require a different set of regulatory parameters. Our initial comments will set forth the reasons why we believe this to be the case. The Commission has identified *"two sets of challenges standing between today and the availability of advanced services to all Americans. The first set is technical. ... Second, our regulatory system is uneven in its treatment of different technologies."*

We believe a third challenge, at least for many rural service areas, is economic. Simply stated, many rural areas are one provider territory for advanced telecommunications services, even with some form of universal service support. We have included as Exhibit A business case scenarios that demonstrate the current economics involved in a rural application. The two business cases presented here were prepared by GVNW for a rural Incumbent LEC client that is considering offering services that fit the description of Advanced Telecommunications Services (ATS) in CC Docket 98-146. This data is offered here to show what we believe to be the actual economics of deployment of ATS in small-scale sites that will be typical of deployments in rural areas. In this case, the population of the service area is approximately 12,000 with about 5,800 households. All potential customers can be reached using xDSL technology. Neither business case is viable under current conditions. There are several reasons for this.

¹ We note the Commission's distinction in its footnote 8 between capability and services. We use both in these comments since, from an end-user perspective (which is truly the perspective that matters), it is the services that will be provided that will measure whether the Commission is implementing the Act to their benefit.

- 1.) Current pricing of equipment is greater than can be justified in deployments of small scale that will be required in rural areas. In all cases, pricing provided by the vendors shows a significant decrease over the five-year period.
- 2.) The price of leased transport is such that it is not economical to deploy a central head end for multiple service locations to realize economies of scale. Transport of video requires large bandwidth, which is uneconomical at current transport rates on the small scale necessary for rural applications. (see also Exhibit B)
- 3.) One would expect to see the business case improve from year to year as more subscribers are added, price of equipment decreases, and efficiencies are realized in operating (people) expenses. Based on current pricing at the scale considered in the evaluation, this does not happen on a significant scale, indicating that there may not be a viable case for these services at the scale deployed in rural areas.

Current and Future Deployment of Advanced Telecommunications Capability

Grappling with technological changes to regulatory paradigms is nothing new to the Commission. Almost thirty years ago, the Commission began to focus on how to reconcile within a Title II common carrier context the convergence and interdependence of communications and data processing technologies. In this regard, the FCC established separate "basic" and "enhanced" service categories which continue with us today. Basic telephone service is provided as a common carrier service, subject to the FCC's Title II authority. Under the *Computer II* series of orders, subject common carriers are permitted to offer enhanced services subject to certain structural safeguards. Under this paradigm, enhanced services per se would not be regulated. With *Computer III*, the FCC permitted select carriers to provide enhanced services on an integrated basis, subject to non-structural accounting and interconnection safeguards.

The technological pace of change has increased by several orders of magnitude. Our review of the current state of affairs indicates that convergence and new technology allows voice, channelized video programming, video on demand, two way video, and information services to be offered over the same ATS platform. We believe that several types of transport platforms are feasible and will soon be economical, including twisted pair copper using xDSLs, fiber to the curb/home (FTTC/FTTH), hybrid fiber coax (HFC), and various wireless technologies.

Under the current regulatory models, transport services can fit several modes. Switched narrowband two-way service (voice or POTS in the traditional definition) falls under Title II of the Telecommunications Act. Channelized video services are addressed by Title VI as "cable services". Defining information service providers and thus information services is addressed in CC Docket No. 96-45. Either Title VI or Open Video Services (OVS) under Section 653 of the Telecommunications Act may address video on demand. Wireless transport of one-way broadcast service is regulated by Title III. Wireless service that is two-way is considered as one of several different services, including PLMRS (Private Land and Mobile Radio - cellular/PCS), SMR (Specialized Mobile Radio) , or LMDS (Local Multipoint Distribution Service). All these two-way wireless service rules currently are determined by the frequency band that the service occupies, even though the service under different rules may be indistinguishable to the customer, as shown by the similarity of cellular, PCS, and some SMR services (e.g., Nextel).

Content may be covered by Title VI if produced by a studio and considered “programming”. Content may alternatively be addressed by CC Docket 96-45 as information services if considered a “web page”. The distinction between these types of content is blurring, especially when episodes of TV shows can be downloaded from web sites.² We concur with the opinion expressed in the recent OPP Working Paper³ that: *It is increasingly likely that . . . regulatory categories painstakingly established over many years to further particular policy goals must necessarily collapse of their own weight in the digital communications world of tomorrow.*

Who should deploy Advanced Telecommunications Capability

In paragraph 57, the Commission asks: *“Does it appear that ‘the race’ to deploy advanced telecommunications capability is one that only one runner or a few runners can win (that is, a natural monopoly or oligopoly)? Or is the market, especially in the last mile market, one that seems capable of supporting many entrants?”*

While the debate will likely continue for some time as to the efficacy of the Telecommunications Act’s “two-pipe policy” assumption, rural America remains predominantly a “one-pipe world” for at least the near term. Any Commission findings based on the premise that competition and universal availability are compatible may prove flawed. While the Act calls for both of these public policy goals to be achieved, the Commission is left with the very difficult task of overseeing directly contradictory

² The recent posting of episodes of the cartoon show “South Park” on several Internet sites may have been the first mass deployment of video on demand.

³ FCC Office of Plans and Policy (OPP) Working Paper Series #30 - Internet Over Cable: Defining the Future in Terms of the Past, August 1998, page 117

objectives. In a truly competitive arena, the business objective of profit maximization precludes serving unprofitable customers unless one is forced to do so.

Reasonable and Timely Deployment

At paragraphs 65 and 66, the Commission addresses rural area issues and asks for possible reasons for "slow" deployment.

While we will discuss this more fully in the companion proceeding designated as CC Docket No. 98-147, the Commission's proposed approach for structural options for deploying advanced services is a huge disincentive in rural areas.

One may argue that the Commission appears to believe that by restraining ILECs from "blocking" competition, then competition will flourish. This is simply not the case. Instead, the regulator tacitly discourages investment by, in many cases, the only provider that the rural customer will have for the foreseeable future. The Commission apparently views such ILEC diversification as anti-competitive, ignoring its own Part 64 Rules that provide for accounting safeguards.

The end result? The end result of such an approach is that competition is given precedence over rural customers. Rural customers are "put on hold" and will continue to wait for the promised benefits of "competition", unlikely to occur anytime soon in the sparsely populated markets.

Removing Barriers to Infrastructure Investment and Promoting Competition

At paragraph 77, the Commission asks for comments regarding the appropriateness of the current legal and regulatory models for communications and information services based on the emergence of new technologies and services that would

comprise ATS. All current models are based on legacy services defined by the constraints and limitations of past technologies. The convergence and ongoing upgrades of various legacy technologies and the introduction of new technologies are making the services that are currently envisioned to comprise ATS independent of the underlying technology. Many of the current models are being made obsolete by the emergence of the services that will comprise ATS. None of the legacy models fit the new technology and services. In many cases, it is possible to classify one service under more than one model. This leads to several significant impediments to deployment of ATS.

- 1.) Different players that are all converging toward the same service are treated differently, providing artificial distortions of the market. For instance, Title II and Title VI companies are required to pay franchise fees to localities, whereas various wireless providers are not. Yet, all now or soon will be capable of offering the same services (voice, data, and video) to customers. Title VI companies are required to carry certain content under must carry rules, where information services defined under CC Docket No. 96-45 are not required to do so. Yet both will soon offer access to similar content.
- 2.) The above distortions will result in providers "shopping" for the most beneficial treatment, weakening the Commission's ability to address changes in service on a timely basis by forcing the consideration of various sets of rules applying to the same service.

- 3.) Uncertainty of which rule applies, and the dramatic effect on financial positions that a change of classification could cause will deter market entry. For example, a provider under Title II that was eligible for USF would be negatively impacted, perhaps driven out of business, by being re-classified as a Title VI provider with no USF eligibility.

For advanced service capability, the FCC should converge the regulatory rules as rapidly as is practical to allow all entrants to play by the same set of rules. These rules should be a broad framework that are applied based on factors that include, but are not necessarily limited to:

- 1.) Which markets are being served? Some markets (urban business) are by their nature more profitable than others are (urban residential poor, rural residential). More profitable markets will spawn more providers, and resulting competition will allow for minimal regulation and support of ATS. Less profitable markets will require additional incentives and perhaps additional regulation. We should not assume that there will be someone available to serve the advanced telecommunications needs of all citizens, especially those who live a great distance from the serving wire center. This assumption may not be valid without adequate universal service mechanisms.

- 2.) Which services are being offered? Some services (voice, traditional cable services) are less risky than new services (two-way video, video on demand). All other things being equal, more risky services will attract fewer competitors, and may require more regulation and support.
- 3.) All rules should be technologically neutral, and, in the case of wireless services, neutral as to what portion of the radio spectrum is used to provide the services.
- 4.) Rules should be as general as possible, so as to allow for maximum innovation and deployment with minimal changes to the rules. Rules should address frameworks, not specifications and details.
- 5.) Rules should change over time to address changes in markets, services, and technology. Flexibility, flexibility, flexibility. Technology does not, however, obsolete the need for infrastructure.
- 6.) Rules should apply equally to all entrants providing the same service in the same market. For example, all providers of voice might be required to pay local franchise fees, and be eligible to receive USF; whereas all providers of video on demand might be exempt from payment of franchise fees and might be eligible to receive a different level of USF.
- 7.) Rules should be designed to encourage deployment of new services and technology by giving certain advantages to new services. An analogy to this might be laws enacted by some states that prohibit taxation of commercial transactions over the Internet at rates higher than other transactions for a set period of time. Another analogy is where localities forgive some taxes for a number of years to

encourage location of new businesses in the locality. Such items as exemption from certain fees and additional support from USF, if applicable, could be in effect for new services until a given market penetration is reached, or a set period of time expires, whichever occurs sooner. Exhibit B illustrates the high cost of transport in rural areas - demonstrating that the copper wire loop may not be the bottleneck that prevents economical deployment in rural America. The Commission may need to consider mandating a special transport rate applicable to deployment of ATC/ATS in rural America.

- 8.) Any support provided for new services under ATS should require universal coverage on a set time frame, to assure that uneconomical "cream skimming" does not take place. In a rural area, deployment in the town only would probably preclude any viable business case for the customers outside the town. The best existing proof of this is the deployment of CATV systems in rural areas that were built without any support such as USF. These systems usually serve small towns, but not the residents outside the towns. A second system that served the rural customers outside of town only has not been viable historically.
- 9.) Any support should require that minimum service standards be achieved for outages, repair response, customer interfaces, and billing accuracy and correction. This will preclude deployment of sub-standard systems that are built to obtain support. A historical example of this phenomenon is the many rural "speculative" CATV systems that were built in the mid-1980's with the sole purpose of being sold at the high prices existing at the time. Based on acquisition inspections that

we have performed, these systems are often built as inexpensively as possible with little thought to long term service quality. After several years of operation, service quality often deteriorates to very low levels. Minimum service standards are required to prevent this from happening in deployment of ATS.

WHAT DOES THIS MEAN FOR RURAL AMERICA?

Prior to such a new framework being implemented, the Commission should consider several changes to existing rules and proposals within this NOI and the companion NPRM in CC Docket No. 98-147. The current regulatory scheme of requiring unbundled resale at rates that guarantee competitors a profit is a strong disincentive, if not deterrent, to any investment in advanced telecommunications capability, at least in the rural markets. Was the intent of Congress to place the entire burden and risk on rural incumbent local exchange carriers? We believe that is not the case.

We believe that an approach similar to the Commission's course of action in the *Computer III* proceeding is applicable to assist the deployment of advanced telecommunications capability in rural America. [With *Computer III*, the FCC permitted select carriers to provide enhanced services on an integrated basis, subject to non-structural accounting and interconnection safeguards.] We recommend that companies eligible under Section 251 (f) be exempt from resale and interconnection requirements for advanced telecommunications capability and services for a period of 3 years.


CONCLUSION

It appears clear that a primary objective of the Commission in these proceedings is to incent competition in the provision of advanced telecommunications capability. However, it is also clear that competition will emerge unevenly among geographic areas, services, and customer classes. We question whether mandating competition at any cost was the Congressional intent for rural areas of the country. At least for rural LEC customers, access to advanced telecommunications capability and reasonably priced services will come from the ILEC, if at all. To achieve this Congressionally-mandated capability, the Commission must recognize the differences between urban and rural markets. It is only by recognizing these differences that the Commission will enable the development of affordable advanced telecommunications services to rural Americans.

GVNW INC./MANAGEMENT
CC Docket No. 98-146 @ September 14, 1998

Respectfully submitted

GVNW Inc./Management

By: 

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**Business Case Evaluation
For Provision of
Advanced Telecommunications Services
Over Twisted pair Copper and xDSL Technology**

The two business cases presented here were prepared by GVNW for a rural Incumbent LEC client that is considering offering services that fit the description of Advanced Telecommunications Services (ATS) in CC Docket 98-146. These are offered here to show what we believe to be the actual economics of deployment of ATS in small-scale sites that will be typical of deployments in rural areas. In this case, the population of the service area is approximately 12,000 with about 5,800 households. All potential customers can be reached using xDSL technology.

The business plans presented here are for a non-regulated affiliate offering the ATS service over loops leased from the ILEC. Two plans were evaluated:

- 1.) Plan 1: All program content is provided from local equipment.
- 2.) Plan 2: Content equipment is located remotely. Content is transported over leased interexchange transport to the local ATS provider from a central location.

The evaluation was conducted over a projected five-year period. Only the Income Statements are provided here for the sake of brevity.

Advanced Services Provided:

All services considered in this evaluation can be provided from equipment that is currently available or in beta test. GVNW has extensive experience in field trial of equipment and services with our clients in this area.

Services Offered:

- Broadcast Channels (CATV like service)
- Video on Demand
- High Speed Internet/Data Network Access
- Two Bandwidths – 256 Kilobit and 1.544 Megabit

Inputs:

Values for the inputs were based on real world numbers wherever possible. In many cases, quotations were obtained from providers of equipment or services required to offer ATS. Revenues were based on actual prices and market penetration experienced by various existing providers of like services. Many GVNW clients are small telephone companies that also offer CATV service or Internet service, or both. Their experience in prices paid for is included. The above input assumptions thus reflect real world conditions as much as these currently exist. Some items, such as the price for high-speed internet/data access had to be assumed, since there is not a significant number of these services deployed to have a large database of price and market penetration. In all cases, inputs were assumed on a conservative basis, so as not to overstate the business case for providing services where there is limited or no current experience.

INPUT ASSUMPTIONS

Revenue:

Service	Amount	Basis for Amount
Broadcast Video – (CATV like) – Basic Service	\$26.99 /customer/month Market penetration 22% of homes passed in year 1 growing to 70% in year 5	Current prices and penetration of CATV provider in nearby urban area
Broadcast Video – (CATV like) – Premium Service	\$8.99 /premium service/month Market penetration 50% premium of basic in year 1 changing to 48% in year 5	Current prices and penetration of CATV provider in nearby urban area
Broadcast Video – (CATV like) – Set Top Box Lease	\$3.95 /customer/month Market penetration 22% of homes passed in year 1 growing to 70% in year 5	Current prices and penetration of CATV provider in nearby urban area
Internet Basic – 256 Kb	\$37.99 /customer/month Market penetration 5% percent of total households in year 1 changing to 19% in year 5	Estimate based on experience of GVNW dial up Internet Service Providers
Internet Premium – 1.5 Mb	\$49.99 /customer/month Market penetration 1% percent of total households in year 1 changing to 5% in year 5	Estimate based on experience of GVNW dial up Internet Service Providers
Video On Demand	\$3.50 per event ordered in Yr. 1 to \$3.00 in Yr. 5 1.5 events leased per basic broadcast customer per month in Yr. 1 to 2.2 events in Yr. 5.	Lease rates between current Video Rental stores and current CATV Pay-Per-View subscription rates - per VOD content provider.
Advertising – Local Market	\$1.00 per basic broadcast customer per month in Yr. 1, growing to \$3.00 in Yr. 5	Local advertising revenue of GVNW client CATV providers
Install Fees	\$149.99 per install	Recover cost of wiring house with Category 5 data wire required for ATS

Capital Investment

Investment	Amount	Basis for Amount
Video on Demand Server, Digital Video Encoders, Digital Switching/Routing Infrastructure, ADSL Modems	\$2,528.00 per customer in Yr. 1, changing to \$3,304.00 in Yr. 5.	Manufacturer's price quotes
Digital Set Top Box	\$682.00 per unit in Yr. 1, changing to \$279.00 in Yr. 5	Manufacturer's price quotes

Expenses:

Expense	Amount	Basis for Amount
People Expenses (Sales, marketing, customer service, engineering, accounting, management,, legal, consulting, insurance)	\$11.15 per customer per month in Yr. 1 changing to \$8.48 in Yr. 5	Current GVNW Client people expenses reduced to reflect increased efficiency and lower ongoing costs after start up.
Internet Addresses and Server Capacity	\$3.00 per Customer per month – all years	GVNW clients that are Internet Service Providers
Lease of Local Loop from Incumbent LEC	\$25.00 per cable pair per month	Various ILEC tariffs for ISDN/DSL conditioned loops.
Software Right to Use/Network Management/System Integration	\$.50 per customer per month – all years	Provider's price quotes
Video Programming	Basic - \$6.00 per basic broadcast customer per month Premium - \$5.00 per premium customer per channel per month Video on Demand - \$2.00 per event shown	Published prices for channels, and experience of GVNW clients that are CATV providers
Facilities Lease to Remote Server	\$31,743.00 per DS-3 per month – 200 miles	Interexchange carrier quotes
Install labor	\$140.00 per install	GVNW client experience

Financial Parameters

Item	Amount	Basis for Amount
Interest Rate	7.00%	Prevailing borrowing rates for small companies
Term of Loan – Initial	20 Years	

Construction		
Depreciation Service Life	6 Years	

Observations:

Neither business case is viable under current conditions. There are several reasons for this.

- 1.) Current pricing of equipment is greater than can be justified in deployments of small scale that will be required in rural areas. In all cases pricing provided by the vendors shows a significant decrease over the five-year period.
- 2.) The price of leased transport is such that it is not economical to deploy a central head end for multiple service locations to realize economies of scale. Transport of video requires large bandwidth, which is uneconomical at current transport rates on the small scale necessary for rural applications.
- 3.) One would expect to see the business case improve from year to year as more subscribers are added, price of equipment decreases, and efficiencies are realized in operating (people) expenses. Based on current pricing at the scale considered in the evaluation, this does not happen on a significant scale, indicating that there may not be a viable case for these services at the scale deployed in rural areas.

Conclusions:

- 1.) Advanced Telecommunications Services is not a viable business case on a stand-alone basis at the small scales that would be deployed in rural areas.
- 2.) The high cost of leased broadband transport makes it uneconomical to realize economies of scale in equipment deployment by centralizing equipment.
- 3.) GVNW recommended to the client that, given the current business case, Advanced Telecommunications Service not be deployed at this time.

FULL HEAD END AT COMPANY

SAMPLE TELEPHONE COMPANY
BUSINESS PLAN - ADVANCED TELECOMMUNICATIONS SERVICES
INCOME STATEMENT

Calendar Year Estimate	1 Forecast 1998	2 Forecast 1999	3 Forecast 2000	4 Forecast 2001	5 Forecast 2002	Cumulative 5 Yr.
Income Statement and Cash Flow - Pro Forma						
Operating Revenues						
Operating Transfers In	\$0	\$0	\$0	\$0	\$0	\$0
Subscription Fees - CATV Basic	\$291,492	\$582,984	\$1,004,028	\$1,198,356	\$1,327,908	\$4,404,768
Subscription Fees - CATV Premium	\$48,546	\$97,092	\$161,820	\$188,790	\$215,760	\$712,008
Subscription Fees - VOD	\$0	\$0	\$0	\$0	\$0	\$0
Subscription Fees - Local Telephone Service	\$0	\$0	\$0	\$0	\$0	\$0
Subscription Fees - Internet Basic	\$91,176	\$136,764	\$227,940	\$364,704	\$501,468	\$1,322,052
Subscription Fees - Internet Premium	\$29,994	\$59,988	\$89,982	\$134,973	\$179,964	\$494,901
Subscription Fees - Lease STB	\$42,660	\$85,320	\$130,200	\$155,400	\$172,200	\$585,780
Transaction Fees - Internet Services	\$0	\$0	\$0	\$0	\$0	\$0
Transaction Fees - VOD	\$170,100	\$347,760	\$568,230	\$639,360	\$723,240	\$2,448,690
Long Distance Revenues	\$0	\$0	\$0	\$0	\$0	\$0
Advertising Revenue Local Market	\$10,800	\$32,400	\$74,400	\$111,000	\$147,600	\$376,200
Advertising Revenue Inet Links/Comsn	\$0	\$0	\$0	\$0	\$0	\$0
Advertising Revenue- Other	\$0	\$0	\$0	\$0	\$0	\$0
Install Fees	\$149,990	\$127,492	\$191,237	\$116,242	\$89,994	\$674,955
Increased Cost Recovery - Additional Sub Ckt Eqpt						
Interstate	\$0	\$0	\$0	\$0	\$0	\$0
State	\$0	\$0	\$0	\$0	\$0	\$0
Less: Bad Debt/Write-offs	(\$13,695)	(\$26,846)	(\$45,132)	(\$55,852)	(\$65,363)	(\$206,888)
Total Revenue	\$821,063	\$1,442,953	\$2,402,705	\$2,852,974	\$3,292,771	\$10,812,466
Revenue/Sub/Mo	\$68.42	\$65.00	\$64.07	\$60.96	\$60.98	\$63.89

FULL HEAD END AT COMPANY

SAMPLE TELEPHONE COMPANY
BUSINESS PLAN - ADVANCED TELECOMMUNICATIONS SERVICES
INCOME STATEMENT

Calendar Year Estimate	1 Forecast 1998	2 Forecast 1999	3 Forecast 2000	4 Forecast 2001	5 Forecast 2002	Cumulative 5 Yr.
Operating Expenses						
Sales/Marketing - Services	\$36,000	\$50,616	\$64,980	\$61,632	\$54,047	\$267,275
Sales/Marketing - Advertising	\$1,800	\$4,995	\$11,250	\$17,550	\$24,300	
Customer Services (Labor)	\$36,000	\$69,930	\$124,031	\$162,531	\$196,912	\$589,404
Engineering	\$18,000	\$24,975	\$31,641	\$29,616	\$25,629	\$129,860
Management	\$9,000	\$17,483	\$31,008	\$40,633	\$49,228	\$147,351
Accounting	\$9,000	\$14,985	\$22,781	\$25,588	\$26,572	\$98,926
Billing Costs	\$12,000	\$21,090	\$33,844	\$40,125	\$43,983	\$151,042
Legal Fees	\$4,920	\$7,282	\$9,840	\$9,824	\$9,069	\$40,934
Insurance	\$1,920	\$3,730	\$6,615	\$8,668	\$10,502	\$31,435
Consulting Fees	\$9,960	\$14,741	\$19,920	\$19,888	\$18,358	\$82,867
Internet Access Cost (Server Ports, IP License)	\$9,000	\$14,400	\$23,400	\$36,900	\$50,400	\$134,100
Local Telephone - Cable Pair Lease Cost	\$300,000	\$555,000	\$937,500	\$1,170,000	\$1,350,000	\$4,312,500
Software RTU/ Network Management	\$6,000	\$11,100	\$18,750	\$23,400	\$27,000	\$86,250
Long Distance Cost	\$0	\$0	\$0	\$0	\$0	\$0
Programming - Basic	\$64,800	\$129,600	\$223,200	\$266,400	\$295,200	\$979,200
Programming - Premium	\$27,000	\$54,000	\$90,000	\$105,000	\$120,000	\$396,000
Programming - VOD	\$97,200	\$198,720	\$349,680	\$426,240	\$482,160	\$1,554,000
(1) Facilities Lease - Transport	\$0	\$0	\$0	\$0	\$0	\$0
Install Labor, each (Wire House/CAT 5)	\$139,860	\$119,000	\$178,500	\$108,500	\$84,000	\$629,860
Interest	\$222,262	\$372,895	\$619,111	\$734,226	\$816,448	\$2,764,942
Depreciation - Video Server - VOD	\$33,195	\$51,795	\$75,825	\$86,031	\$92,264	\$339,110
Depreciation - Digital Video Encoder+HE - CATV	\$73,170	\$73,170	\$89,667	\$89,667	\$106,813	\$432,487
Depreciation - ATM Video Equip	\$163,956	\$315,170	\$628,611	\$809,427	\$952,830	\$2,869,994
Depreciation - ADSL	\$162,333	\$286,518	\$454,168	\$545,882	\$609,786	\$2,058,689
Depreciation - Set Top Box - VOD & CATV	\$102,300	\$184,140	\$278,711	\$313,629	\$332,252	\$1,211,032
Depreciation - Other						
Foregone Cost Recovery - Allocation of Loop to Video						
Interstate	\$0	\$0	\$0	\$0	\$0	\$0
State	\$0	\$0	\$0	\$0	\$0	\$0
Total Expense	\$1,539,676	\$2,595,334	\$4,323,032	\$5,131,356	\$5,777,754	\$19,367,153
Expense/Sub/Mo	\$128.31	\$116.91	\$115.28	\$109.64	\$107.00	\$115.43
Net Income (Loss)/Year	(\$718,614)	(\$1,152,381)	(\$1,920,327)	(\$2,278,383)	(\$2,484,982)	(\$8,554,687)
Net Income/Sub/mo	(\$59.88)	(\$51.91)	(\$51.21)	(\$48.68)	(\$46.02)	(\$51.54)

Notes:

1. Required for Transport Based Business Plans Only, Not Required for Full Head End/Internet Provider Business Plan.

HEAD END LOCATED REMOTELY

SAMPLE TELEPHONE COMPANY
BUSINESS PLAN - ADVANCED TELECOMMUNICATIONS SERVICES
INCOME STATEMENT

Calendar Year Estimate	1 Forecast 1998	2 Forecast 1999	3 Forecast 2000	4 Forecast 2001	5 Forecast 2002	Cumulative 5 Yr.
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Subscription Fees - CATV Basic	\$291,492	\$582,984	\$1,004,028	\$1,198,356	\$1,327,908	\$4,404,768
Subscription Fees - CATV Premium	\$48,546	\$97,092	\$161,820	\$188,790	\$215,760	\$712,008
Subscription Fees - VOD	\$0	\$0	\$0	\$0	\$0	\$0
Subscription Fees - Local Telephone Service	\$0	\$0	\$0	\$0	\$0	\$0
Subscription Fees - Internet Basic	\$91,176	\$136,764	\$227,940	\$364,704	\$501,468	\$1,322,052
Subscription Fees - Internet Premium	\$29,994	\$59,988	\$89,982	\$134,973	\$179,964	\$494,901
Subscription Fees - Lease STB	\$42,660	\$85,320	\$130,200	\$155,400	\$172,200	\$585,780
Transaction Fees - Internet Services	\$0	\$0	\$0	\$0	\$0	\$0
Transaction Fees - VOD	\$170,100	\$347,760	\$568,230	\$639,360	\$723,240	\$2,448,690
Long Distance Revenues	\$0	\$0	\$0	\$0	\$0	\$0
Advertising Revenue Local Market	\$10,800	\$32,400	\$74,400	\$111,000	\$147,600	\$376,200
Advertising Revenue Inet Links/Comsn	\$0	\$0	\$0	\$0	\$0	\$0
Advertising Revenue- Other	\$0	\$0	\$0	\$0	\$0	\$0
Install Fees	\$149,990	\$127,492	\$191,237	\$116,242	\$89,994	\$674,955
Increased Cost Recovery - Additional Sub Ckt Eqpt						
Interstate	\$0	\$0	\$0	\$0	\$0	\$0
State	\$0	\$0	\$0	\$0	\$0	\$0
Less: Bad Debt/Write-offs	(\$13,695)	(\$26,846)	(\$45,132)	(\$55,852)	(\$65,363)	(\$206,888)
Total Revenue	\$821,063	\$1,442,953	\$2,402,705	\$2,852,974	\$3,292,771	\$10,812,466
Revenue/Sub/Mo	\$68.42	\$65.00	\$64.07	\$60.96	\$60.98	\$63.89

HEAD END LOCATED REMOTELY

SAMPLE TELEPHONE COMPANY
BUSINESS PLAN - ADVANCED TELECOMMUNICATIONS SERVICES
INCOME STATEMENT

Calendar Year Estimate	1 Forecast 1998	2 Forecast 1999	3 Forecast 2000	4 Forecast 2001	5 Forecast 2002	Cumulative 5 Yr.
Operating Expenses						
Sales/Marketing - Services	\$36,000	\$50,616	\$64,980	\$61,632	\$54,047	\$267,275
Sales/Marketing - Advertising	\$1,800	\$4,995	\$11,250	\$17,550	\$24,300	
Customer Services (Labor)	\$36,000	\$69,930	\$124,031	\$162,531	\$196,912	\$589,404
Engineering	\$18,000	\$24,975	\$31,641	\$29,616	\$25,629	\$129,860
Management	\$9,000	\$17,483	\$31,008	\$40,633	\$49,228	\$147,351
Accounting	\$9,000	\$14,985	\$22,781	\$25,588	\$26,572	\$98,926
Billing Costs	\$12,000	\$21,090	\$33,844	\$40,125	\$43,983	\$151,042
Legal Fees	\$4,920	\$7,282	\$9,840	\$9,824	\$9,069	\$40,934
Insurance	\$1,920	\$3,730	\$6,615	\$8,668	\$10,502	\$31,435
Consulting Fees	\$9,960	\$14,741	\$19,920	\$19,888	\$18,358	\$82,867
Internet Access Cost (Server Ports, IP License)	\$9,000	\$14,400	\$23,400	\$36,900	\$50,400	\$134,100
Local Telephone - Cable Pair Lease Cost	\$300,000	\$555,000	\$937,500	\$1,170,000	\$1,350,000	\$4,312,500
Software RTU/ Network Management	\$6,000	\$11,100	\$18,750	\$23,400	\$27,000	\$86,250
Long Distance Cost	\$0	\$0	\$0	\$0	\$0	\$0
Programming - Basic	\$64,800	\$129,600	\$223,200	\$266,400	\$295,200	\$979,200
Programming - Premium	\$27,000	\$54,000	\$90,000	\$105,000	\$120,000	\$396,000
Programming - VOD	\$97,200	\$198,720	\$349,680	\$426,240	\$482,160	\$1,554,000
(1) Facilities Lease - Transport	\$761,832	\$1,142,748	\$1,523,664	\$2,666,412	\$3,428,244	\$9,522,900
Install Labor, each (Wire House/CAT 5)	\$139,860	\$119,000	\$178,500	\$108,500	\$84,000	\$629,860
Interest	\$178,070	\$322,072	\$552,819	\$665,579	\$740,216	\$2,458,756
Depreciation - Video Server - VOD	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation - Digital Video Encoder+HE - CATV	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation - ATM Video Equip	\$163,956	\$315,170	\$628,611	\$809,427	\$952,830	\$2,869,994
Depreciation - ADSL	\$162,333	\$286,518	\$454,168	\$545,882	\$609,786	\$2,058,689
Depreciation - Set Top Box - VOD & CATV	\$102,300	\$184,140	\$278,711	\$313,629	\$332,252	\$1,211,032
Depreciation - Other						
Foregone Cost Recovery - Allocation of Loop to Video						
Interstate	\$0	\$0	\$0	\$0	\$0	\$0
State	\$0	\$0	\$0	\$0	\$0	\$0
Total Expense	\$2,150,951	\$3,562,294	\$5,614,913	\$7,553,424	\$8,930,688	\$27,812,270
Expense/Sub/Mo	\$179.25	\$160.46	\$149.73	\$161.40	\$165.38	\$163.24
Net Income (Loss)/Year	(\$1,329,888)	(\$2,119,341)	(\$3,212,207)	(\$4,700,451)	(\$5,637,917)	(\$16,999,804)
Net Income/Sub/mo	(\$110.82)	(\$95.47)	(\$85.66)	(\$100.44)	(\$104.41)	(\$99.36)

Notes:

1. Required for Transport Based Business Plans Only, Not Required for Full Head End/Internet Provider Business Plan.

**COST OF INTEREXCHANGE TRANSPORT
URBAN AND RURAL AREAS
REPRESENTATIVE SAMPLE
BASED ON RECENT QUOTATIONS**

From	To	Bandwidth	Approx. Distance (Miles)	Monthly Price	Type
Portland, OR	Colorado Springs, CO	56 Kb	1,500	\$357.00	Urban
Springfield, IL	Colorado Springs, CO	56 Kb	1,000	\$367.00	Urban
Kerrville, TX	Colorado Springs, CO	56 Kb	1,000	\$442.00	Rural
Eureka, MT	Great Falls, MT	56 Kb	200	\$1,731.00	Rural
Halfway, OR	Boise, ID	56 Kb	99	\$1,359.00	Rural
Richland, OR	Boise, ID	56 Kb	101	\$1,313.00	Rural
Helix, OR	Portland, OR	56 Kb	187	\$728.50	Rural
Dufur, OR	Portland, OR	56 Kb	74	\$721.00	Rural
Mt. Vernon, OR	Portland, OR	56 Kb	89	\$1,199.00	Rural
Scobey, MT	Billings, MT	56 Kb	555	\$1,692.50	Rural
Havre, MT	Great Falls, MT	56 Kb	364	\$1,692.50	Rural
Worden, MT	Billings, MT	56 Kb	424	\$1,648.00	Rural
Oakhurst, CA	Los Angeles, CA	56 Kb	300	\$2,035.00	Rural
Gervais, OR	Portland, OR	56 Kb	27	\$561.00	Rural
Portland, OR	Colorado Springs, CO	512 Kb	1,500	\$2,141.00	Urban
Springfield, IL	Colorado Springs, CO	512 Kb	1,000	\$2,098.00	Urban
Kerrville, TX	Colorado Springs, CO	512 Kb	1,000	\$2,939.00	Rural
Victoria, IL	Oneida, IL	1.544 Mb	58	\$5,750.00	Rural
McNabb, IL	Chicago, IL	1.544 Mb	100	\$3,112.00	Rural
Elko, NV	Reno, NV	545 Mb	150	\$22,242.00	Rural